



CONCORSO PUBBLICO, PER ESAMI, PER IL RECLUTAMENTO DI N. 1 UNITÀ DI PERSONALE AFFERENTE ALL'AREA DEI FUNZIONARI-SETTORE SCIENTIFICO-TECNOLOGICO, CON RAPPORTO DI LAVORO SUBORDINATO A TEMPO INDETERMINATO PRESSO L'UNIVERSITÀ DEGLI STUDI DI MILANO - DIPARTIMENTO DI SCIENZE AGRARIE E AMBIENTALI - PRODUZIONE, TERRITORIO, AGROENERGIA - CODICE 22499

La Commissione giudicatrice della selezione, nominata con Determina Direttoriale n. 19152 del 14/11/2024, composta da:

Prof. Alessio Scarafoni	Presidente
Prof.ssa Paola Antonia Corsetto	Componente
Dott. Stefano De Benedetti	Componente
Dott.ssa Ilaria Almasio	Segretaria

comunica i quesiti relativi alla prova orale:

GRUPPO DI QUESITI N. 1

Utilizzo di approcci spike e internal standard per la quantificazione in massa.

Brano in inglese:

The general knowledge of defence activity during the first steps of seed germination is still largely incomplete. The present study focused on the proteins released in the exudates of germinating white lupin seeds. During the first 24 h, a release of proteins was observed. Initially (i.e. during the first 12 h), the proteins found in exudates reflected the composition of the seed, indicating a passive extrusion of pre-formed proteins. Subsequently, when the rate of protein release was at its highest, the composition of the released proteome changed drastically. This transition occurred in a short time, indicating that more selective and regulated events, such as secretory processes, took place soon after the onset of germination.

GRUPPO DI QUESITI N. 2

Check point per la valutazione dell'attendibilità di un'analisi in LC-MS di una matrice biologica vegetale.

Brano in inglese:

The present study considered: (a) the characterization of the proteome accumulated in the germinating medium collected after the appearance of the post-extrusion events; (b) the biosynthetic origin and the modalities that are the basis of protein release outside the seeds; and (c) an assessment of antifungal activity of these exudates. The most represented protein in the exudate was chitinase, which was synthesized de novo. The other proteins are involved in the cellular mechanisms responding to stress events, including biotic ones. This exudate was effectively able to inhibit fungal growth. The results of the present study indicate that seed exudation is a dual-step process that leads to the secretion of selected proteins and thus is not a result of passive leakage. The released proteome is involved in protecting the spermosphere environment and thus may act as first defence against pathogens.

Milano, 3 dicembre 2024

La Commissione

Prof. Alessio Scarafoni Presidente

Prof.ssa Paola Antonia Corsetto Componente



UNIVERSITÀ DEGLI STUDI DI MILANO

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